

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A method for the production of metal chips comprising the steps of:

i) providing a mixture of a metal alloy powder with a foaming agent powder, said foaming agent having a given decomposition temperature above which the foaming agent decomposes into gas, and said powders comprising finely dispersed solid particles;

ii) pre-compacting the mixture of step i);

iii) heating the pre-compacted mixture of step ii) to a temperature below said decomposition temperature and at which permanent bonding of the particles can occurs;

v) hot compacting the mixture obtained in step iii) for producing a compacted body made of a metal matrix embedding the foaming agent; and

vi) reducing the compacted body into metal fragments and thereby obtaining foamable metal chips.

2. (original) A method as defined in claim 1, wherein the step i) of providing the metal alloy powders and the foaming agent powder comprises the step of:

-disintegrating metal scraps, metal particles or metal chips into said metal alloy powder.

3. (previously presented) A method as defined in claim 1, comprising, after step vi), the steps of:

-heating the foamable chips to a temperature below a liquidus temperature of said metal alloy and sufficient to make the metal chips plastic; and

-extruding the heated metal (chips) body for producing a foamable metal wire.

4. (original) A method as defined in claim 3, comprising after the step of extruding, the step of:

cutting the wire into smaller foamable wire segments.

5. (previously presented) A method as defined in claim 1 for producing porous metal pellets, comprising the additional step of:

vii) heating the foamable metal chips obtained in step vi) to a temperature above said decomposition temperature of the foaming agent.

6. (original) A method as defined in claim 5, comprising, prior to step vii) of heating the metal foamable metal chips, the step of:

-mixing said foamable metal chips with other powders.

7. (original) A method as defined in claim 6, wherein the other powders are made of refractory material powders.

8. (original) A method as defined in claim 7, comprising, prior to mixing the foamable metal chips with the refractory material powders, the steps of:

-heating the foamable metal chips to a temperature below a liquidus temperature of said metal alloy and sufficient to make the metal chips plastic; and

-shaping the metal chips into metal granules.

9. (original) A method as defined in claim 8, wherein the metal granules are spherical.

10. (original) A method as defined in claim 9, wherein the step of shaping the metal chips into metal granules comprises the steps of:

- dispersing the heated chips as a monolayer on a flat heated surface;
- applying a heated plate over said monolayer, and shaping the metal granules by simultaneously applying pressure with the heated plate and performing circular movement with the same.

11. (previously presented) A method as defined in claim 9, comprising, after step vi) of disintegrating, the step of:

- classifying the metal chips by grain sizes.

12. (original) A method as defined in claim 11, wherein the grain sizes range from 1,5mm to 40mm.

13. (previously presented) A method as defined in claim 12, wherein the metal powders are aluminum alloy powders.

14. (previously presented) A method as claimed in claim 13 wherein the foaming agent is selected from the group consisting of TiH_2 and CaCO_3 .

15. (previously presented) A method as claimed in claim 14, wherein the step v) of hot compacting is hot rolling.

16. (previously presented) Use of porous metal pellets as defined in claim 10, as fillers for a material selected from the group consisting of a polymeric material, a soundproof material, a fireproof material and a shock absorption material.

17. (original) Use of porous metal pellets as defined in claim 16, wherein the polymeric material is a resin.

18-39. (cancelled)

40. (new) A method of obtaining the foaming agent-containing metal particles, including the following steps:

- i) mixing metal particles with the powder of foaming agent, for example TiH_2 , CaCO_3 and other;
- ii) pre-compaction of the obtained mixture of powders of step i) to a blank;
- iii) heating the blank of step ii) to the sintering temperature of metal particles, but lower than the temperature of dissociation of foaming agent;
- iv) hot pressing of the blank of step iii) to obtain compact material;
- v) mechanical grinding of the material of step iv) to obtain the foaming agent-containing metal particles.

41. (new) A method, as it is determined in patent formula 40, for obtaining the porous metal granules, including the additional step:

- vi) heating metal particles of step v) to the temperature exceeding the temperature of decomposition of foaming agent, i.e. foaming.

42. (new) Method, as it is determined in patent formula 41, before step vi) heating metal particles of step v), including the following steps:

- vii) mixing metal particles with the powders of refractory materials;
- viii) heating the powder mixture of step vii) to the temperature, lower than the solidus temperature, i.e. to the plastic state of matrix metal;

- ix) giving to metal particles the form of granules.

43. (new) Method, as it is determined in patent formula 42, including the following steps;

- spheroidization of metal particles with the aid of heated flat plates;
- application of pressures on the plates and execution by them of circular motions;
- sorting of metal particles according to sizes,

44. (new) Method, as it is determined in the points of patent formula 40, in which metal particles are aluminum alloys.

45. (new) Method, as it is declared in the points of patent formula 40, in which step iv) of hot pressing is the hot rolling.

46. (new) Use of foamed (porous) metal granules, as determined in the points of patent formula 41, as the filler for polymeric materials and also for sound-absorbing and damping materials.

47. (new) A method of obtaining the metal foam materials, including the following steps (stages):

- (a) mixing metal particles with the powder of foaming agent;
- (b) packing of the mixture of powders (step "a") into a metal shell (container), i.e. in a form of closed volume; - *distinguishing feature*;
- (c) pre-compaction of the mixture of powders (step "b") in the container; - *distinguishing feature*;
- (d) heating the container and the powder mixture (step "c") to the temperature, lower than the temperature of decomposition of

foaming agent. They are jointly compacted by applying pressure, ensuring consolidation (sintering) of the powder mixture and the metal container, i.e. obtaining composite material of the type "sandwich"; - *distinguishing feature*.

48. (new) A method, as it is determined in point "d" of the patent formula 47, in which the temperature of decomposition of foaming agent is lower than the melting point of metal particles, i.e. lower than the liquidus line temperature.

49. (new) A method, as it is determined in the point of patent formula 48, in which foaming agents are selected from the propellants TiH_2 , CaCO_3 and others.

50. (new) A method, as it is determined in patent formula 47 (step "d"), includes the processes of heating sandwich (to the temperature exceeding the temperature of decomposition of foaming agent) and its foaming to obtain metal foam material.

51. (new) A method, as it is determined in the point "c" of patent formula 47, in which preliminary pre-compaction of the powder mixture is made by cold rolling, static pressing or vibration.

52. (new) A method, as it is determined in the point "d" of patent formula 47, in which the compaction pressure is made by hot rolling to obtain the density of powder alloy equal to 95-100%.

53. (new) A method, as it is declared in the points of patent formula 47, in which the container (shell) is a metal form of rectangular section, rollable (deformable) as in the longitudinal so in the lateral directions.

54. (new) A method, as it determined in patent formula 53, in which the continuous surfaces of the shell, forming *closed volume*, are joined by welding or bending of longitudinal and face edges or by other methods.

55. (new) A method, as it determined in the points of patent formula 54, in which the metal shell of closed volume is made of sheet metal, in particular from aluminum, by continuous deformation (continuous process) or by measured length (batch process).

56. (new) A method, as it determined in the points of patent formula 47 in which metal particles are dispersed powders or granules.